Figure 38: Suggestions for Information/Data to Monitor

This table provides suggestions for the information/data that it would be helpful for monitoring and measuring success over time.

To measure…	Data Used	2 years out	5 years out*	10 years out**
Improvements/Decline in Forest Viability:				
Forest patch isolation	forest cover date in GIS format		Collect information on reforestation	Rerun analysis using updated forest cover data in GIS format
Maturity	estimates	Refine measures using better data on maturity (no data currently exists; only estimates.)		*Collect new data and rerun analysis*
mosaics of dominant tree species present	estimates	Refine measures using better data on oak dominance (no data currently exists; only estimates.)		*Collect new data and rerun analysis*
zonal thickness	forest cover data in GIS format		Collect information on reforestation	Rerun analysis using updated forest cover data in GIS format
Improvements/Decline in Coastal Plain Pond Complexes:				
pond density	coast plain pond data in GIS format		Collect information on any new destruction/draining of ponds	Rerun analysis using information collected on destroyed/drained ponds
depth and duration of inundation	*none currently*	Report on research to provide data, establish baseline		Collect new data and rerun analysis
forested habitat surrounding pond	forest cover data in GIS format			Rerun analysis using updated forest cover data in GIS format
pH	*none currently*	Report on research to provide data, establish baseline		Collect new data and rerun analysis
Improvements/Decline in Tidal Wetland and Water Viability:				
Ability to migrate	migration zone (modeled for 60cm sea level rise) and development data (GIS, from LULC)			Rerun analysis using new LULC and/or migration data in GIS format
Extent of natural buffers to tidal wetlands and waters (beyond SLR)	migration zone (modeled for 60cm sea level rise) and forest cover data in GIS format		Collect information on reforestation	Rerun analysis using updated forest cover data in GIS format
Impervious surfacing in watershed	LULC and Water Resource Agency coefficients/worksheet		Rerun analysis using updated LULC data	
Extent of upland ditching, export (atm, wastewater) of extracted groundwater	*none currently*	use State of Delaware ditching data to establish baseline		Rerun analysis using updated ditching/draining information
absence of obstructions/alterations to flow regime	Digital Ortho photography		Visual inspection of new Digital Ortho for changes	
Characteristic vegetation dominant within appropriate salinity, elevation zones	*none currently*	use DNREC *Phragmites* mapping to establish baseline	Collect information on *Phragmites* control/mapping	Rerun analysis (mapping) of *Phragmites*
Improvements/Decline in Riparian Corridor Viability:				
absence of obstructions/alterations to flow regime	*none currently*	update measures/status based on ditch data and stream survey results.	Collect information on stream restoration	Rerun analysis using new data/information
Impervious surfacing in the watershed	(see above)	(see above)	(see above)	(see above)
forested buffers on streams in watershed	forest cover and stream data in GIS format		Collect information on reforestation	Rerun analysis using updated forest cover data in GIS format
water chemistry	DNREC and MD DNR stream quality assessment reports	use new/better water quality data to update/revise measures?	Re-run analysis based on new water quality information (if applicable)	Re-run analysis based on new water quality information
Improvements/Decline in Viability of Rural Amenities and Ecological Services:				
Population per acre of public access	2000 Census block and LULC data	Develop thresholds based on survey/research?	Rerun using new Census and LULC data	Rerun using new Census and LULC data; new survey?
length of ownership	2000 Census block group data	Develop thresholds based on survey/research?	Rerun using new Census data	Rerun using new Census data; new survey?
Population per acre of open space	2000 Census block and LULC data	Develop thresholds based on survey/research?	Rerun using new Census and LULC data	Rerun using new Census and LULC data; new survey?
Acres available for agriculture	LULC data	Develop thresholds based on survey/research?	Rerun using new LULC data	Rerun using new LULC data; new survey?
Acres in forest cover	LULC data	Develop thresholds based on survey/research?	Rerun using new LULC data	Rerun using new LULC data; new survey?
Increasing/Decreasing Threats:*		** New/Updated Threats Analysis and Strategy Development will be needed between years 5 and 10.*		
Road construction/upgrades		Report on new activities/threats		
Residential/commercial development		Report on new activities/threats	Rerun associated measures using new LULC	
Extent of alien species' invasion		Report on new activities/threats, and results of *Phragmites* mapping.		
Incompatible agricultural practices		Report on new activities/threats		
Lack of understanding regarding open space and ecological service values		Report on new activities/threats		
Climate change/increased rate of sea level rise		Report on new activities/threats	Rerun associated measures using new LULC	
Loss of natural upland buffer		Report on losses		
Construction of ditches, dikes, drainage or diversion systems, channelization or rivers, streams, and shoreline stabilization, and/or improperly set culverts		Report on losses	Rerun associated measures using new LULC (see above) and ditching data	
Unsustainable/incompatible forestry practices		Report on losses/threats		
Lack of incentives/opportunities for new/better products or technology		Report on gains or new threats		
Incompatible management and abuse of public access		Report on new activities/threats and landowner survey results		
Strategy Outcomes:		** New/Updated Threats Analysis and Strategy Development will be needed between years 5 and 10.*		
P1. Modify Agricultural Land Preservation program to protect forest land.		Program up and running - acres protected?	Program up and running - acres protected?	
P2. Coordinate efforts of land-protecting organizations on private lands		Integrated in agency/organization's priorities? Acres protected?	How many priority acres protected	
P3. Overlay/combine forest protection agreements with agricultural preservation easements		System for overlaying developed? Any protection underway?	How many priority acres protected	
P5. Expand opportunities for property tax relief for forest landowners.		Incorporate survey results to determine actions	Accomplished?	
P6. Increase pool of federal funds for land protection in the Corridor.		Funders recognize Corridor as priority? Any funding directed to Corridor?	How much funding directed to Corridor?	
P7. Increase/improve the pool of state funds for land protection in the Corridor.		Funders recognize Corridor as priority? Any funding directed to Corridor?	How much funding directred to Corridor?	
P8. Increase/improve the contribution of county funds to land protection in the Corridor.		Funders recognize Corridor as priority? Any funding directed to Corridor?	How much funding directed to Corridor?	
P9. Amend Delaware conservation tax credit law to allow sale of credits.		Revisit based on survey results	Accomplished?	
E1. Use land use planning to more effectively guide development away from Corridor priority areas.		Are positive changes proposed or underway?	Changes implemented? Any results?	
E2. Explore mechanisms for better infrastructure planning.		Any mechanisms identified/implemented?	What mechanisms implemented? Any results?	
E3. To help keep farms in the Corridor, provide technical information/assistance.		Providing new/better assistance?	How many farmer reached?	
E4. To maintain the quality of streams and wetlands, find ways to minimize impervious coverage.		Programs developed/underway?	How many people reached? Results?	
E5. Utilize county comprehensive plans to attract agriculture and resource-based business to the Corridor.		Programs developed/underway?	Program results? New econ development/farmers?	
C1. Direct, coordinate, and connect environmental education opportunities utilizing the established centers.		Corridor priorities incorporated in existing education programs?	People reached	
C2. Coordinate regional planning and the creation of a non-governmental coordinator position for the Corridor.		Coordinator in place? 2-Year forum successful?	5-Year Forum successful?	
C3. Reduce non-point source pollution to streams and wetlands by conducting outreach to homeowners.		Outreach underway?	People reached - any differences in water quality measured?	
C4. Develop/implement an advocacy training program in the Corridor.		Corridor residents included in advocacy programs?	Corridor advocates program/network established/running?	
C5. Create a "back-yard habitat" program for residential areas.		Corridor residents provided with information/assistance?	Program for Corridor habitat established/running?	
C6. Create a new suite of community programs/events.		Events planned, with community support?	Events successful?	
C7. Provide Corridor landowners with expert information and assistance for estate and retirement planning.		Outreach/events underway	Landowners assisted?	
M1. Focus new DNREC landowner incentive program funds to priority areas.		Corridor prioritized, outreach underway	People reached, acres restored with incentives in Corridor?	
M2. Increase/consolidate capacity for outreach on restoration and best management practices.		Corridor prioritized, outreach underway	People reached, acres restored with incentives in Corridor?	
M3. Provide technical and cost-sharing assistance for restoration.		Acres restoration underway	Acres restored	
M4. Pilot program for aggressive/coordinated invasive species control.		Team created?	Acres managed/invasive-free	
M5. Maximize existing Landowner Incentive Programs (LIP) for restoration in the Corridor.		Acres restoration underway	Acres restored	
M6. Continue to reforest key lands in the Blackbird State Forest and Millington Wildlife Management Area.		Acres reforestation underway	Acres reforested	
M7. Utilize Delaware Forest Service and Millington Wildlife Management Area programs/efforts to achieve forest management		Forest conservation information in materials/outreach?	Acres protected	
M8. Secure new funds for stream restoration work via EPA 319 grant or other.		Funds secured	Acres restored	
M9. Maintain/strengthen state's phragmites control program.		Outreach to priorities complete, management underway	Acres managed	
M10. Focus all available public land restoration and management funding and efforts on Corridor priorities.		Corridor eligible/priority for funding; funding available	Funds to Corridor	
R1. Confirm or revise baseline estimates for forest maturity and composition with more accurate information.		Baseline complete		
R2. Continue to improve information on flora and fauna for the Corridor.		New information/needs?	Report on/incorporate new information/needs	
R3. Improve information/understanding of coastal plain pond key attributes and management.		Research results?	Report on/incorporate research results	
R4. Improve knowledge of aquatic life/flow in Cypress Branch and Blackbird Creek.		Results in MD? Progress in Delaware?	Report on/incorporate research results	
R5. Use bird radar study results to determine importance for stop over.		Report on results and implications		
R6. Refine/update the baseline for characteristic vegetation for tidal marshes in the Corridor.		Baseline for *Phragmites* complete		
R7. Conduct landowner survey to determine Corridor preferences for financial incentives conservation options, and/or rura		Survey funded/underway	Survey results incorporated in strategies	

* At 5 years out, the plan will need to be updated to assess new threats and to respond to information collected from all partners on new threats, advances/declines in existing threats, and the success/failure of threat abatement activities. Some key attributes could be remeasures to inform this process (such as impervious, or those relying land use/land cover data) to help inform the creation of a new set of strategies based on success, lessons, learned, and new threats or opportunities.

** At 10 years out, progress should be measurable across all targets, but it will take at least 50 years to see real forest viability improvements.